

WEBINAR

Exploring the Upper Atmosphere to Close Climate Knowledge Gaps

The upper troposphere and stratosphere remain among the least observed regions of Earth's atmosphere, yet they play a critical role in regulating climate, atmospheric circulation, and the transport of greenhouse and ozone-depleting gases. We use Aircores, the MOSES Payload and the newly designed NIXE-Ballon instrument flown on weather balloons to open new opportunities to directly sample these remote layers of the atmosphere. During a collaborative campaign between the South African Weather Service and the Forschungszentrum Jülich Institute for Climate and Energy Systems (ICE-4: Stratosphere), an expanded suite of balloon-borne sensors is being deployed to measure greenhouse gases, trace halocarbons, water vapour, aerosols and microscopic cirrus cloud particles. Because such measurements are exceptionally scarce in the Southern Hemisphere, these observations offer a rare window into atmospheric composition and change, providing essential data to improve satellite validation and climate model predictions.

In this seminar, we will introduce this innovative observational approach and share preliminary findings that highlight its potential to close critical knowledge gaps in climate science and reduce uncertainties in climate projections.



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DATE

26 March 2026



TIME

10:00-11:00 SAST

